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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,875	06/21/2006	Nigel C. Savage	505473	8992

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REINHART BOERNER VAN DEUREN P.C.
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EXAMINER

LEE, Y MY QUACH

ART UNIT	PAPER NUMBER
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2885

NOTIFICATION DATE	DELIVERY MODE
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02/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

RockMail@reinhartlaw.com

Office Action Summary	Application No. 10/583,875	Applicant(s) SAVAGE, NIGEL C.	
	Examiner Y M. Lee	Art Unit 2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3-8 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☒ Claim(s) 2 and 10-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. PCT/GB05/01743.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the reference sign (35) as mentioned in paragraph 0042 of the amendment of June 21, 2006.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature of "a plate of thermally conductive metal inside the housing and in thermal contact with the housing" as claimed in claim 4, "the boards" as claimed in claim 10 and "the base" as claimed in claim 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Specification

3. The disclosure is objected to because of the following informalities: In the amendment of June 21, 2006, the claim or claims must commence on separate sheet.

Appropriate correction is required.

Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

Claim Objections

4. Claims 2 and 10 to 20 are objected to because of the following formalities:

In claim 2, line 3, "the lighting unit" is incorrect. It is suggested that "the lighting unit" should be changed to --the array of light emitting diodes--. Note drawing figure 1, the back wall 11 of housing 2 is in direct contact with a surface on which the array of light emitting diodes is mounted.

In claim 10, this claim lacks a cooperative structure. It is suggested that "in a resin compound" be inserted after "board" on line 4 to properly describe the claimed invention.

In claim 11, line 10, there is no clear antecedent basis for "the side wall". It is suggested that "the side wall" should be changed to --side wall--.

In claim 13, line 2, there is no clear antecedent basis for "the at least one aperture". Note that "at least one aperture" was first introduced in claim 12. Line 3, there is no clear antecedent basis for "the back wall". Note that "a back wall" was first introduced in claim 12. Lines 5 to 6, the language "or through a hull of the marine vessel" is inaccurate and should be deleted. In view of the specification and drawings, the mounting stem 16 is externally screw threaded through the back wall of a cofferdam 2 of a marine vessel for mounting the underwater lighting unit to the back wall of the cofferdam.

In claim 14, line 4, the language "or stems" should be deleted.

In claim 15, lines 2 to 4, 7 and 10, the language "or through a hull of the marine vessel" and "or the hull" is inaccurate and should be deleted. In view of the specification

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and drawings, the lighting unit is secured through a back wall of a cofferdam 2 of a marine vessel. Line 4, there is no clear antecedent basis for “the back wall”. Note the objection to claim 13.

In claim 16, line 6, there is no clear antecedent basis for “the base”.

In claim 18, line 8, there is no clear antecedent basis for “the side wall”. It is suggested that “the side wall” should be changed to --side wall--.

Claims 12 and 17 depend on objected claim 11 and as such are also objected.

Claims 19 and 20 depend on objected claim 18 and as such are also objected.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Mohacsi.

Mohacsi shows each LED (45) having at least 1 watt in power (paragraph 0030, line 2, and paragraph 0045, line 5).

7. Claims 1 and 3 to 8 are allowed.

8. Claim 2, 10, 12 to 17, 19 and 20 would be allowable if rewritten to overcome the objection set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Claims 11 and 18 would be allowable if rewritten or amended to overcome the objection set forth in this Office action.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Balestriero et al. is cited to show other pertinent light emitting diodes (2, 22) mounted on a printed circuit board (3, 21) against a back wall of a heat conductive housing (1) with a conical collimator (4, 23) and a light transmitting plate (10, 24).

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Owen et al. is cited to show an array of LEDs (92) mounted on a printed circuit board (94) and secured to a thermally conductive housing (96) having upper and lower metal plates (116, 118) between which a fluid tube (114) is in direct contact with the housing to control the temperature of housing with optical elements (124) provided adjacent to the LEDs. Koren et al. is cited to show water entering a gap (40) between a metallic plate (25) and a cap (20) to form a heat sink to cool the LED mounted on the plate protected from water by an annular washer (26), a lens 30, a lens collar 32 and an outer collar. Poggi is cited to show other pertinent mounting stem (16) for mounting a lamp of an underwater light fitting and sealed with an end cap (31) through an o ring (35).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Y Quach Lee whose telephone number is 571-272-2373. The examiner can normally be reached on Monday to Thursday from 8:30 am to 2:30 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service 571-272-2815.

Y. Q.
January 28, 2008

/Y M. Lee/
Primary Examiner, Art Unit 2885